AIRCRAFT DISPATCHER

UNIT 1 – AIRCRAFT FLIGHT PLANNING

LESSON D – POINT LOCATION DESCRIPTIONS

INSTRUCTIONS TO THE INSTRUCTOR

Unit 1 is composed of four lessons; consider using more than one qualified instructor to teach this unit.

NOTES

DETAILED LESSON OUTLINE

COURSE: Aircraft Dispatcher

UNIT: 1 – Aircraft Flight Planning

LESSON: D – Point Location Descriptions

TIME: 40 minutes

TRAINING AIDS: Overhead projector or computer with CD-ROM and computer projector; projection screen; markers, masking tape or tacks; handouts; flip chart;

OBJECTIVES: Given a simulated wildland fire incident, case study, or exercise, students will be able to:

- Identify two primary methods of describing a point location to a pilot.
- Describe the difference between coordinates given in degrees/minutes/tenths and degrees/minutes/seconds.
- Convert one type of coordinate to another.

OUTLINE	AIDS & CUES
INTRODUCE THE LESSON.	1D-01-ACDP-EP
PRESENT THE LESSON OBJECTIVES.	1D-02-ACDP-EP 1D-03-ACDP-EP
I. DESCRIBING LOCATIONS	1D-04-ACDP-EP
A. Geographic Locations	1D-05-ACDP-EP
Geographic locations can be used to describe point locations.	

OUTLINE			AIDS & CUES
	The pilot and aircraft dispatcher must be familiar with the area.		
	Example: 5 miles south of Mount St. Helens		
B.	Latitude and Longitude		1D-06-ACDP-EP
	1.	World-wide methods of finding a location	1D-07-ACDP-EP
	2.	Loran or Global Positioning Satellite (GPS)	
	3.	Published on all aeronautical charts	
	4.	Written or Spoken	1D-08-ACDP-EP
		a. Degrees, minutes, seconds	
		b. Degrees, minutes, tenths or hundredths, or thousandths	
		c. Degrees, tenths, hundredths, thousandths, or greater	
	5.	Converting Coordinates	
		a. Seconds to tenths:	1D-09-ACDP-EP
		• Seconds ÷ 60 seconds = tenths	
		– 15 ÷ 60 = .25	
		• Tenths x 60 seconds = seconds	
		– .25 x 60 = 15”	

OUTLINE	AIDS & CUES
b. Basic Conversions: Seconds — Tenths 15 — .25 30 — .50 45 — .75 60 — 1.00	
REFER STUDENTS TO PAGE 1D.5 OF THE STUDENT WORKBOOK FOR AN EXERCISE IN CONVERTING FROM TENTHS TO SECONDS AND FROM SECONDS TO TENTHS. THIS CAN BE A STAND ALONE EXERCISE OR YOU CAN WALK STUDENTS THROUGH THE PROCESS USING THE 1D-11-ACDP-EP AND 1D-12-ACDP-EP.	1D-01-ACDP-IR 1D-10-ACDP-EP THRU 1D-13-ACDP-EP SG page 1D-5
C. Township, Range, and Section (Legal)	1D-13-ACDP-EP
Formally known as the Rectangular Land Description System	
Planned in 1784 by the Continental Congress.	
• "Public lands shall be divided by North and South lines and by other lines running East and West so as to form Townships 6 miles square (not 6 square miles, but a square of 6 miles on each side, with an area of 36 square miles)."	
• "The Townships will be divided into 36 sections, and each will contain 640 acres (as nearly as possible)."	1D-14-ACDP-EP

OUTLINE		AIDS & CUES
D.	Universal Transverse Mercator (UTM)	1D-15-ACDP-EP
	The Universal Transverse Mercator is an international plane (rectangular) coordinate system developed by the U.S. Army. The UTM divides the world into 60 zones of 6 degrees longitude. Each zone extends 3 degrees east and west from its central meridian and are numbered consecutively west to east from the 180-degree meridian.	
E.	VHF Omni-directional Range (VOR)	1D-16-ACDP-EP
	The VOR or VORTAC station transmits a unique signal allowing aircraft to determine its bearing relative to the VOR station.	
SOUTHERN STUDENTS MAY INQUIRE AS TO USING METES AND BOUNDS FOR DESCRIBING LOCATIONS. METES AND BOUNDS ARE NOT UTILIZED IN AIRCRAFT DISPATCHING.		
REVIEW LESSON OBJECTIVES.		1D-17-ACDP-EP
ASK THE STUDENTS IF THERE ARE ANY QUESTIONS.		1D-18-ACDP-EP

AIRCRAFT DISPATCHER

UNIT 1 – AIRCRAFT FLIGHT PLANNING

LESSON D – POINT LOCATION DESCRIPTION

INSTRUCTOR REFERENCE

Reference No.	Description
1D-01-ACDP-EP	Coordinate Conversion Exercise

NOTES

COORDINATE CONVERSION EXERCISE

1. You have been given the following coordinates:

   Latitude: 43°33’.85”N
   Longitude: 116°13’.37”W

   Convert the coordinates from tenths to seconds:

   Latitude:

   .85 x 60 = 51”

   Longitude:

   .37 x 60 = 22”

2. You have been given the following coordinates:

   Latitude: 43°33’51”N

   Longitude: 116°13’22”W

   Convert the coordinates from seconds to tenths:

   Latitude:

   51” ¸ 60 = .85

   Longitude:

   22” ¸ 60 = .37

NOTES